Attorney Docket No. 58260-011600

Appl. No.: 10/528,444

Amendment Dated October 18, 2005

CLAIMS

Claim 1 (currently amended):

A triptolide derivative of formula I

wherein R1 is [[H,]] phosphate (

X₁ and X₂ are Na, K, or NH₄.

$$-\frac{1}{2} < \frac{cx_1}{cx_2}$$
), or phosphite $(-\frac{c}{2} < \frac{cx_1}{H})$, and

Claim 2 (original): A method for preparation of the compound according to claim 1, comprising the step of reacting the first lead compound triptolide with POCl₃, PCl₃ or other phosphonate halide, phosphate, phosphite halide, phosphite.

Claim 3 (currently amended):

A triptolide derivative of formula II

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wherein R_1 is [[H,]] alkyl having 1-4 carbon atom(s), $-C(=O)(CH_2)_nCO_2H$, wherein n is an integer of 1-4. or phosphate $(-P < 0x_1 \atop 0x_2)$, or phosphite $(-P < 0x_1 \atop 0x_1)$, wherein X_1 and X_2

are Na, K, or NH4; and R2 is H, -SCN, -Cl or -Br.

Claim 4 (currently amended): A method for preparation of the compound according to claim 3, comprising the step of esterifying the second lead compound 12-β-thiocyano-13-α-hydroxy triptolide with succinic anhydride to obtain the compound of formula II., or the step-of phosphoric esterifying the second lead-compound -12-β-thiocyano-13-α-hydroxy triptolide with POCh, PCl₃, phosphonate halide, phosphate, phosphite halide, or phosphite to obtain the compound of formula II.

Claim 5 (currently amended): A triptolide derivative of formula IIIa or IIIb

wherein R2 is H, SCN, Cl or Br.

Claim 6 (currently amended): A method for preparation of the compound according to claim 5, comprising the step of reacting the second lead compound 12-β-thiocyano-13-α-hydroxy triptolide with POCl₃ or other phosphonate halide, phosphate, phosphite and the like. , or the step of reacting the first lead compound triptolide with POCl₃ or other phosphonate halide, phosphite halide and the like.

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Claim 7 (currently amended): The compound of claim 5 wherein said compound is used Use of the compounds according to any one of claims 1, 3, and 5 in the preparation of medicament as immunosuppressive agent or anti-inflammatory agent.

Claim 8 (original): The use according to claim 7, wherein said immunosuppressive agent or anti-inflammatory agent is used in the treatment of diseases associated with growth of lymphocytes T and B cells; production of cytokines such as IL-1, IL-2, IL-6, and iNOS; and production of Cox-2.

Claim 9 (original): The use according to Claim 8, wherein said diseases are autoimmune deficiency diseases and inflammatory diseases.

Claim 10 (original): The use according to claim 9, wherein said diseases are selected from the group consisted of rheumatoid arthritis, asthma, systemic lupus erythematosus, psoriasis, multiple sclerosis, atherosclerosis, type I diabetes, and nephritis.

Claim 11 (original): The use according to claim 7, wherein said immunosuppressive agent or anti-inflammatory agent is used in the prevention of organ rejection and prolongation of the survival time of transplanted organ in organ transplantation.

Claim 12 (new): A triptolide derivative of formula IIIb

IIIb

wherein R2 is H, SCN, Cl or Br.

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Claim 13 (new): A method for preparation of the compound according to claim 12, comprising the step of reacting the second lead compound $12-\beta$ -thiocyano- $13-\alpha$ -hydroxy triptolide with POCl₃ or other phosphonate halide, phosphate, phosphite and the like, or the step of reacting the first lead compound triptolide with POCl₃ or other phosphonate halide, phosphite halide and the like.

Claim 14 (new): The compound of Claim 12 wherein said compound is used in the preparation of medicament as immunosuppressive agent or anti-inflammatory agent.

Claim 15 (new): The use according to claim 14, wherein said immunosuppressive agent or anti-inflammatory agent is used in the treatment of diseases associated with growth of lymphocytes T and B cells; production of cytokines such as IL-1, IL-2, IL-6, and iNOS; and production of Cox-2.

Claim 16 (new): The use according to claim 15, wherein said diseases are autoimmune deficiency diseases and inflammatory diseases.

Claim 17 (new): The use according to claim 16, wherein said diseases are selected from the group consisted of rheumatoid arthritis, asthma, systemic lupus erythematosus, psoriasis, multiple sclerosis, atherosclerosis, type I diabetes, and nephritis.

Claim 18 (new): The use according to claim 14, wherein said immunosuppressive agent or anti-inflammatory agent is used in the prevention of organ rejection and prolongation of the survival time of transplanted organ in organ transplantation.

Claim 19 (new): The compound of Claim 3 wherein said compound is used in preparation of medicament as immunosuppressive agent or anti-inflammatory agent.

Claim 20 (new): The use according to claim 19, wherein said immunosuppressive agent or anti-inflammatory agent is used in the treatment of diseases associated with growth of lymphocytes T and B cells; production of cytokines such as IL-1, IL-2, II-6, and iNOS; and production of Cox-2.

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The use according to claim 20, wherein said diseases are Claim 21 (new): autoimmune deficiency diseases and inflammatory diseases.

The use according to claim 21, wherein said diseases are selected Claim 22 (new): from the group consisted of rheumatoid arthritis, asthma, systemic lupus erythematosus, psoriasis, multiple sclerosis, atherosclerosis, type I diabetes, and nephritis.

The use according to claim 19, wherein said immunosuppressive Claim 23 (new): agent or anti-inflammatory agent is used in the prevention of organ rejection and prolongation of the survival time of transplanted organ in organ transplantation.

The compound of Claim 1 wherein said compound is used in the Claim 24 (new): preparation of medicament as immunosuppressive agent or anti-inflammatory agent.

The use according to claim 24, wherein said immunosuppressive Claim 25 (new): agent or anti-inflammatory agent is used in the treatment of diseases associated with growth of lymphocytes T and B cells; production of cytokines such as IL-1, IL-2, IL-6, and iNOS; and production of Cox-2.

The use according to claim 25, wherein said diseases are Claim 26 (new): autoimmune deficiency diseases and inflammatory diseases.

The use according to claim 26, wherein said diseases are selected Claim 27 (new): from the group consisted of rheumatoid arthritis, asthma, systemic lupus erythematosus, psoriasis, multiple sclerosis, atherosclerosis, type I diabetes, and nephritis.

The use according to claim 24, wherein said immunosuppressive Claim 28 (new): agent or anti-inflammatory agent is used in the prevention of organ rejection and prolongation of the survival time of transplanted organ in organ transplantation.

The compound according to Claim 3 wherein R1 is one of a Claim 29 (new): phosphate $\left(-\frac{1}{p} < \frac{cx_1}{cx_2}\right)$ or a phosphite $\left(-\frac{1}{p} < \frac{cx_1}{H}\right)$ and wherein X_1 and X_2 are Na or K or NH4 and R2 is H or SCN or Cl or Br.

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The compound of Claim 29 wherein said compound is used in the Claim 30 (new): preparation of medicament as immunosuppressive agent or anti-inflammatory agent.

The use according to claim 30, wherein said immunosuppressive Claim 31 (new): agent or anti-inflammatory agent is used in the treatment of diseases associated with growth of lymphocytes T and B cells; production of cytokines such as IL-1, IL-2, IL-6, and iNOS; and production of Cox-2.

The use according to claim 31, wherein said diseases are Claim 32 (new): autoimmune deficiency diseases and inflammatory diseases.

The use according to claim 32, wherein said diseases are selected Claim 33 (new): from the group consisted of rheumatoid arthritis, asthma, systemic lupus erythematosus, psoriasis, multiple sclerosis, atherosclerosis, type I diabetes, and nephritis.

The use according to claim 30, wherein said immunosuppressive Claim 34 (new): agent or anti-inflammatory agent is used in the prevention of organ rejection and prolongation of the survival time of transplanted organ in organ transplantation.

A method for preparation of the compound according to claim 5, Claim 35 (new): comprising the step of reacting the first lead compound triptolide with POCl3, or other phosphonate halide, phosphate halide and the like.

A method for preparation of the compound according to claim 3, Claim 36 (new): comprising the step of phosphoric esterifying the second lead compound 12-β-thiocyano-13-a-hydroxy triptolide with POCl3, PCl3, phosphonate halide, phosphate, phosphite halide, or phosphate to obtain the compound of formula II.

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